

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS

1/ A syringe retraction arrangement adapted to automatically retract a syringe into a container upon full depression of a plunger of the syringe into the syringe thereby avoiding the potential for needle stick injuries.

2/ A syringe retraction arrangement as in Claim 1 wherein the syringe is resiliently biased to retract into the container and has a retaining arrangement to prevent it retracting and has release means for the retaining arrangement which are engaged upon complete depression of the plunger to operate the release means.

3/ A syringe retraction arrangement including a sleeve assembly and syringe, the syringe being of a type having a syringe barrel with a plunger bulb and a plunger arm terminating in a plunger flange, the plunger adapted to move in the syringe barrel and a hypodermic needle extending from the syringe barrel, the sleeve assembly including a sleeve to receive the syringe with an aperture at one end of the sleeve through which the hypodermic needle extends in use, a pair of ears on the sleeve on the end remote from the aperture, the ears adapted to engage the end of the syringe barrel remote from the hypodermic needle and to release the syringe barrel by disengagement with the end of the barrel when the ears are spread apart and means to move the syringe barrel within the sleeve assembly so as to move the syringe to withdraw the hypodermic needle into the sleeve tube when the end of the syringe barrel is released from the ears.

4/ A syringe retraction arrangement as in Claim 3 wherein the end of the syringe barrel is adapted to be released when the plunger flange on the plunger arm engages with the ears and spreads them apart.

- 5/ A syringe retraction arrangement as in Claim 3 or Claim 4 further including a guide arrangement mounted onto the syringe barrel which guide arrangement travels in a guide track within the sleeve assembly.
- 6/ A syringe retraction arrangement as in any one previous claim wherein the means to move the syringe barrel within the sleeve is a resilient means.
- 7/ A syringe retraction arrangement as in any one previous claim wherein the means to move the syringe barrel within the sleeve is a spring acting between the sleeve assembly and the barrel.
- 8/ A syringe retraction arrangement as in any one previous claim further including a detent on the guide arrangement which engages with a recess in the sleeve assembly and thereby retains the guide arrangement and hence the syringe within the sleeve assembly when the syringe needle has been retracted into the sleeve assembly.
- 9/ A syringe retraction arrangement as in any one previous claim wherein the guide arrangement is a single plastic moulding which is slid over the syringe barrel and fastened in place by adhesive or by an interference fit.
- 10/ A syringe retraction arrangement as in any one previous claim wherein the guide arrangement is a two component piece which is clamped round the syringe barrel and fastened together in the clamped position such as by ultrasonic welding or by adhesive or by thermal welding.
- 11/ A syringe retraction arrangement as in any one previous claim wherein the sleeve assembly is comprised of two separate components so that the syringe can be placed between the two components and then the components joined together to make the sleeve assembly.

12/ A syringe retraction arrangement as in Claim 11 wherein the two components of the sleeve assembly are adapted to be joined together so that they cannot be disassembled.

13/ A syringe retraction arrangement as in Claim 11 wherein the two components are joined longitudinally so that there are two sleeve parts joined longitudinally.

14/ A syringe retraction arrangement as in Claim 11 wherein the two components are joined laterally so that there are two sleeve parts joined laterally.

15/ A syringe retraction arrangement as in Claim 11 further including a cap on the end of the sleeve assembly to cover the needle when it is extending from the sleeve assembly.

16/ A syringe retraction arrangement as in Claim 11 wherein the sleeve assembly terminates at the aperture end of the sleeve in a finger arrangement so that a cap on the syringe may be pushed through the finger arrangement when assembling the sleeve assembly and syringe.